

IN THE CLAIMS:

The following listing of claims will replace all prior versions, and listings, of the claims in the application:

1. (Previously presented) A method of reducing the peak-to-average power ratio (PAPR) of a modulated baseband signal, wherein the baseband signal is constituted by a waveform function modulated by information-carrying symbols transmitted in parallel, the method comprising the steps of:

detecting peaks in the modulated baseband signal that exceed a threshold (C), and generating a pulse sequence signal ( $p[m]$ ) therefrom; and

applying a pulse sequence shaping to filter the pulse sequence signal for generating a peak-cancellation signal ( $c[m]$ ); wherein the pulse sequence shaping is designed such that its pass-band is limited to a frequency-domain gap between the edge of an information-carrying frequency bandwidth of the modulated baseband signal and an edge of a frequency band for the baseband signal defined by a spectral mask specifying a maximum tolerable out-of-band emission.

2. (Cancelled)

3. (Previously presented) The method of Claim 1, further comprising oversampling the modulated baseband signal prior to the peak detecting step.

4-7. (Cancelled)

8. (Previously presented) The method of Claim 1, further comprising subtracting the peak-cancellation signal from the modulated baseband signal to produce a reduced-PAPR modulated baseband signal ( $\hat{s}[m]$ ).

9. (Previously presented) The method of Claim 3, further comprising subtracting the peak-cancellation signal from the modulated baseband signal to produce a reduced-PAPR modulated baseband signal ( $\hat{s}'[m]$ ).

10. (Previously presented) A transmitter comprising:  
a baseband signal generator operable to generate a digital baseband signal ( $\hat{s}[n]$ ) from an input data stream;  
a digital-to-analogue converter operable to convert the digital baseband signal into an analogue baseband signal ( $s[t]$ ) prior to output by a transmitter stage [TX];  
an oversampling filter arranged between the baseband signal generator and digital-to-analogue converter operable to oversample the digital baseband signal to generate an oversampled digital baseband signal ( $\hat{s}[m]$ );  
a signal divider operable to split the oversampled digital baseband signal into first and second parts;  
a peak detector arranged to receive the first part of the oversampled digital baseband signal as input and operable to output a pulse sequence signal ( $p[m]$ ) containing a pulse for each peak in the oversampled digital baseband signal that exceeds a threshold level ( $C$ );  
a pulse shaping filter operable to receive the pulse sequence signal and convert it into a filtered clipping signal ( $c[m]$ ) having a pass-band limited to a frequency-domain gap between an edge of an information-carrying frequency bandwidth of the modulated baseband signal and an edge of a frequency band for the baseband signal defined by a spectral mask specifying a maximum tolerable out-of-band emission; and  
a signal combiner operable to subtract the filtered clipping signal from the second part of the oversampled digital baseband signal to produce a digital baseband signal ( $\hat{s}'[m]$ ) with reduced PAPR for input to the digital-to-analogue converter.

11. (Previously presented) The transmitter of Claim 10, wherein the peak detector is further operable to output the pulse sequence signal comprising pulses having a magnitude corresponding to an amount by which the each peak exceeds the threshold level (C).

12. (Previously presented) The transmitter of Claim 10, wherein the pulse shaping filter comprises an FIR filter.

13. (Previously presented) The transmitter of Claim 11, wherein the pulse shaping filter comprises an FIR filter.